



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0592; Product Identifier 2019-NE-19-AD]

RIN 2120-AA64

Airworthiness Directives; General Electric Company Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all General Electric Company (GE) CF6-80C2A5F, -80C2B1F, -80C2B2F, -80C2B4F, -80C2B5F, -80C2B6F, -80C2B6FA, -80C2B7F, -80C2B8F, -80C2D1F, -80C2K1F, -80C2L1F, -80E1A2, -80E1A3, -80E1A4, and -80E1A4/B model turbofan engines with a certain hydromechanical unit (HMU) installed. This proposed AD was prompted by a report of fuel coking of the HMU fuel metering valve (FMV) electro-hydraulic servo valves (EHSV) resulting in tailpipe fire. This proposed AD would require removal of the HMU and replacement with a part eligible for installation. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact General Electric Company, GE Aviation, Room 285, 1 Neumann Way, Cincinnati, OH, 45215; phone: 513-552-3272; email: aviation.fleetsupport@ge.com. You may view this referenced service information at the FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0592; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Matthew Smith, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7735; fax: 781-238-7199; email: matthew.c.smith@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2019-0592; Product Identifier 2019-NE-19-AD” at the

beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

The FAA will post all comments received, without change, to <http://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this NPRM.

Discussion

The FAA received a report from GE of a tailpipe fire accompanied by engine rumble after airplane pushback and engine start. After further analysis, GE identified a buildup of fuel coking or fuel deposits in the HMU FMV EHSV components. This buildup can cause the EHSV shuttle valve to respond sluggishly or stick in a certain position. This condition, if not addressed, could result in failure of the HMU, engine fire, and damage to the airplane.

Related Service Information under 1 CFR part 51

The FAA reviewed GE Service Bulletin (SB) CF6-80C2 SB 73-0436 R02, dated August 15, 2019, and GE SB CF6-80E1 SB 73-0142 R02, dated August 15, 2019. The SBs provide instructions, differentiated by the turbofan engine model, for repetitive overhauls of the HMU FMV EHSVs. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

The FAA is proposing this AD because it evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require removal of the HMU and replacement with a part eligible for installation.

Costs of Compliance

The FAA estimates that this proposed AD affects 573 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Removal and replacement of HMU	5 work-hours X \$85 per hour = \$425	\$0	\$425	\$243,525
Overhaul HMU FMV EHSV	5 work-hours X \$85 per hour = \$425	\$4,000	\$4,425	\$2,535,525

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

General Electric Company: Docket No. FAA-2019-0592; Product Identifier 2019-NE-19-AD.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all General Electric Company (GE) CF6-80C2A5F, -80C2B1F, -80C2B2F, -80C2B4F, -80C2B5F, -80C2B6F, -80C2B6FA, -80C2B7F, -80C2B8F, -80C2D1F, -80C2K1F, -80C2L1F, -80E1A2, -80E1A3, -80E1A4, and -80E1A4/B model turbofan engines with a certain hydromechanical unit (HMU) part number (P/N) listed in paragraph 1.A., Table 1, of GE Service Bulletin (SB) CF6-80C2 SB 73-0436 R02, dated August 15, 2019; or paragraph 1.A., Table 1, of GE SB CF6-80E1 SB 73-0142 R02, dated August 15, 2019; installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 7300, Engine Fuel and Control.

(e) Unsafe Condition

This AD was prompted by a report of fuel coking of the HMU fuel metering valve (FMV) electro-hydraulic servo valve (EHSV) resulting in tailpipe fire. The FAA is issuing this AD to prevent fuel coking or fuel deposits in the HMU FMV EHSV. The unsafe condition, if not addressed, could result in failure of the HMU, engine fire, and damage to the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Remove the HMU and replace with a part eligible for installation before reaching 40,000 flight hours (FHs) since new or since the last overhaul, or within 180 days after the effective date of this AD, whichever is later. If the FHs since new or last overhaul are unknown and unable to be determined, replace the HMU with a part eligible for installation within 180 days after the effective date of this AD.

(2) Thereafter, remove the HMU before reaching 40,000 FHs since new or since the last overhaul and replace with a part eligible for installation.

(h) Definition

(1) For the purpose of this AD, a “part eligible for installation” is an HMU that has fewer than 40,000 FHs since new or fewer than 40,000 FHs since overhaul.

(2) For the purpose of this AD, an overhaul of the HMU is an overhaul of the HMU FMV EHSV in accordance with Accomplishment Instructions, paragraph 3.C.(3), of GE SB CF6-80C2 SB 73-0436 R02, dated August 15, 2019; paragraph 3.C.(3), of GE SB CF6-80E1 SB 73-0142 R02, dated August 15, 2019; or overhauled by other FAA approved methods.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Matthew Smith, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7735; fax: 781-238-7199; email: matthew.c.smith@faa.gov.

(2) For service information identified in this AD, contact General Electric Company, GE Aviation, Room 285, 1 Neumann Way, Cincinnati, OH, 45215; phone: 513-552-3272; email: aviation.fleetsupport@ge.com. You may view this referenced service information at the FAA, Engine & Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

Issued in Burlington, Massachusetts, on August 30, 2019.

Karen M. Grant,
Acting Manager, Engine and Propeller Standards Branch,
Aircraft Certification Service.

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